

PRELIMINARY EQUIVALENT SKETCH PLAN MARTIN ROAD PROPERTY

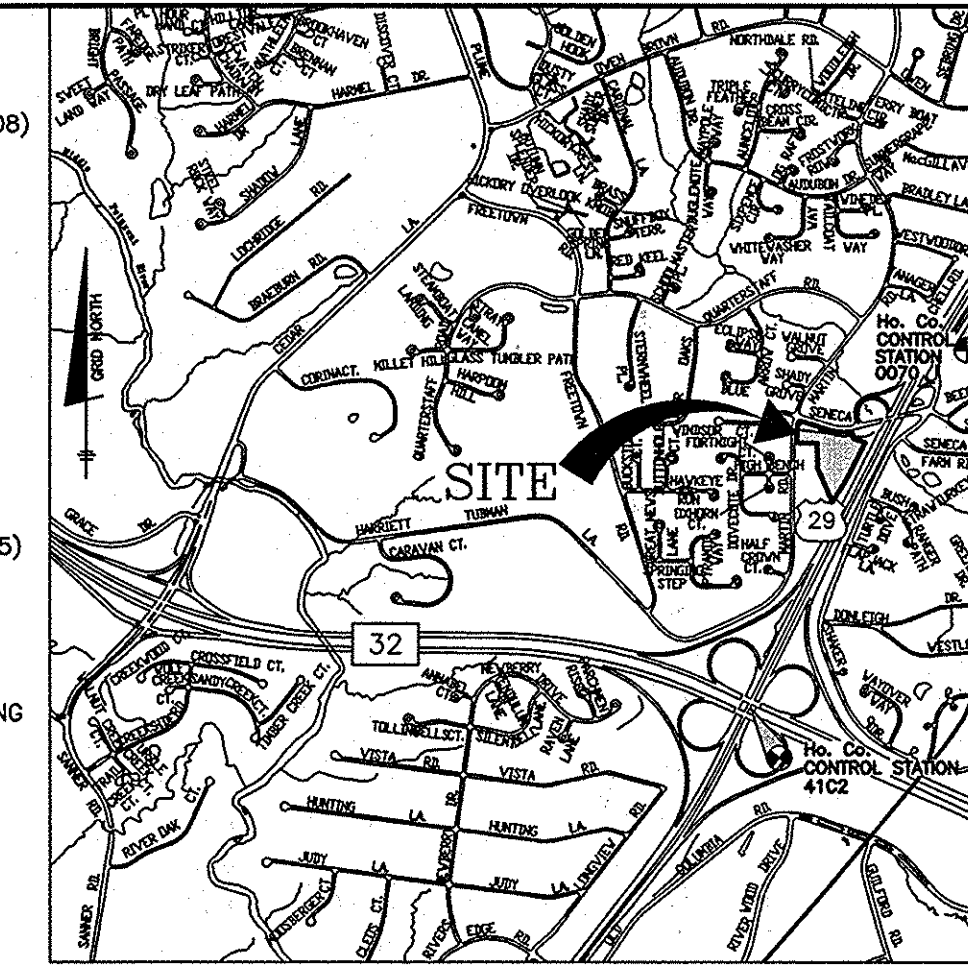
LOTS 1 thru 12 AND OPEN SPACE LOT 13, 14 & 15
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SITE ANALYSIS DATA/TABULATION

A) TOTAL PROJECT AREA.....	6.89± AC.
B) AREA OF WETLANDS AND BUFFER.....	5.07± AC. (P. 04 & 108)
C) AREA OF 100-YR. FLOODPLAIN.....	1.62± AC. (P. 495)
D) AREA OF STEEP SLOPES 25% OF GREATER.....	0.02± AC.
E) NET AREA OF SITE.....	0.45± AC.
F) PUBLIC ROAD DEDICATION.....	0.16 AC. ON-SITE FLOODPLAIN
G) NUMBER OF RESIDENTIAL UNITS PROPOSED.....	6.08 AC.
H) AREA DEDICATED TO HOWARD COUNTY.....	0.70± AC.
I) AREA DEDICATED TO THE HOA.....	12111 PROP. 1 EX.
J) AREA OF CREDITED OPEN SPACE.....	0.91 AC. (LOTS 14&15)
K) RECREATIONAL OPEN SPACE PROVIDED.....	0.92± AC. (EX. LOT)
L) OPEN SPACE REQUIRED.....	2.400 SF (12'x200)
M) RECREATIONAL OPEN SPACE PROVIDED.....	2.400 SF
N) PRESENT ZONING DESIGNATION.....	R-12
O) PROPOSED USE.....	SINGLE FAMILY DWELLING

BENCH MARKS

HO. CO. #0070 (MAD '83)	ELEV. 406.357
STANDARD DISC ON CONCRETE MONUMENT	
E OF RTE 29, NORTH OF SENECA DRIVE BRIDGE	
N 556041.795	E 1350374.642
HO. CO. #41C2 (MAD '83)	ELEV. 395.193
STANDARD DISC ON CONCRETE MONUMENT	
ISLE RTE 32 100' EAST OF RTE 29 NBL	
N 551616.419	E 1348104.192



VICINITY MAP
SCALE: 1"=2000'

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-12 PER THE 10-6-13 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY PREPARED BY BENCHMARK ENGINEERING, INC. DATED NOVEMBER 2013 AND HOWARD COUNTY 2008 GIS AND ARE 2' INTERVALS.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0070 AND 41C2 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC TIED TO CONTRACT NUMBER 24-0553-D, DRAINAGE AREA IS PATAPSCO.
- SEWER IS PUBLIC TIED TO CONTRACT NUMBER 24-0553-D, DRAINAGE AREA IS PATAPSCO.
- STORMWATER MANAGEMENT FOR THIS SITE WILL BE BY ONE BIORETENTION SWALE AND ONE BIORETENTION FACILITY FOR THE PROPOSED PUBLIC ROAD AND PRIVATE ON-LOT MICRO-BIORETENTION FACILITIES AND DRY WELLS FOR THE PROPOSED LOTS.
- THE EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY, HOWARD COUNTY GIS AND SHA CONTRACT DRAWINGS.
- FLOODPLAIN IS BASED ON FEMA PROVIDED BY HOWARD COUNTY.
- A FOREST STAND DELINEATION AND WETLANDS DELINEATION IS PREPARED BY KLEBASCO ENVIRONMENTAL, LLC DATED FEBRUARY 2014.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED MAY 2014.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE STREAMS, OR THEIR REQUIRED BUFFERS AND FLOODPLAIN EXCEPT FOR THE PROPOSED ENTRANCE ROAD GRADING CONSIDERED TO BE NECESSARY TO ENTER THE SITE PER SECTION 16.116(c) AS DEEMED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING.
- THERE ARE NO IMPACTS TO THE ON-SITE STEEP SLOPES.
- TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERIES LOCATED IN THE DEVELOPMENT AREA, THE HOWARD COUNTY HISTORIC PRESERVATION DOCUMENTS (HO-037) INDICATED THE PRESENCES OF GRAVES WITHIN OR NEAR THE SITE, BUT THE LOCATION AND/OR IF THE SITES STILL EXIST ARE NOT CLEAR. BASED ON FIELD SURVEYED TOPOGRAPHY OF THE PROPERTY AND SITE VISIT, NO CEMETERIES OR GRAVE STONES WERE OBSERVED. SEE MAP 29-2.
- A NOISE STUDY FOR THIS PROJECT WAS PREPARED BY BENCHMARK ENGINEERING, INC. DATED MAY 2014. THE FUTURE NOISE WALL ALONG US 29 IS PART OF SHA PROJECT H0317.21 AND WAS CONSIDERED IN PLACE FOR THE ANALYSIS.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GEOTECHNICAL LABORATORIES DATED JUNE 10, 2014 AND LETTER DATED SEPTEMBER 11, 2014.
- THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT WILL BE MET BY THE ON-SITE RETENTION OF 1.22 ACRES OF FOREST AND FEE-IN-LIEU 0.68 ACRES OF AFFORESTATION.
- PREVIOUS DPZ FILES: ECP-14-065
- AT THE TIME OF THE SUBDIVISION PLANS, A MORE DETAILED SEDIMENT CONTROL PLAN SHALL BE DEVELOPED, INCLUDING STUDY OF VARIOUS DISCHARGE AREAS, AND MORE COMPLETE DETERMINATION OF SEDIMENT TRAP NECESSITY.
- A PRE-SUBMISSION MEETING FOR THIS PROJECT WAS HELD ON MARCH 25, 2014 IN ACCORDANCE WITH SECTION 16.128 AND 16.147(b)(1) OF THE SUBDIVISION REGULATIONS.
- THE PLAN WAS PRESENTED TO THE HISTORIC DISTRICT COMMISSION DATED JUNE 5, 2014.
- OPEN SPACE LOT 13 TO BE OWNED AND MAINTAINED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS. LOTS 14 & 15 TO BE OWNED AND MAINTAINED BY THE HOA.
- THE EXISTING ON-SITE WELL AND SEPTIC SYSTEM FOR LOT 12 MUST BE PROPERLY ABANDONED WITH DOCUMENTATION SUBMITTED TO THE HEALTH DEPARTMENT PRIOR TO HEALTH DEPARTMENT SIGNATURE OF THE FINAL RECORD PLAT.
- MAINTENANCE OF TRAFFIC (MOT) FOR THIS SITE IS TO BE PROVIDED AT THE FINAL PLAN STAGE.
- STREET LIGHT PLACEMENT AND TYPE OF FIXTURES AND POLLS SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND TREE.
- TRAFFIC CONTROL DEVICES:
 - THE R1-1 TRAFFIC SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE.
 - THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 - ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON GALVANIZED STEEL PERFORATED SQUARE TUBE POSTS (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE SLEEVE (12 GAUGE). 3' LONG THE ANCHOR SHALL NOT EXTEND MORE THAN TWO HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- THE PROPOSED LOT SIZES ARE BASED ON SECTION 16.121(c)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE EXISTING HOUSE LOCATED ON LOT 12 IS TO REMAIN, DUE TO ITS LOCATION THE HOUSE IS IN NON-COMPLIANCE WITH THE ZONING REGULATIONS, NO NEW BUILDINGS, EXTENSIONS, OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS REQUIREMENTS.
- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAVE APPROVED FEBRUARY 25, 2015 TO VOLUME III, APPENDIX 'A' AND THE RELATED REGULATORY DETAIL R-102, REQUIRING A 50' BUFFER TO THE RIGHT-OF-WAY TO BE USED FOR RESIDENTIAL STREETS. THE REQUEST IS TO REDUCE THE REQUIRED 50' RIGHT-OF-WAY TO A 40' RIGHT-OF-WAY SUBJECT TO THE FOLLOWING:
 - PROVIDE A 10' UTILITY EASEMENT FOR PRIVATE UTILITIES ALONG THE PROPOSED ROAD, NO PRIVATE UTILITY SHOULD BE LOCATED WITHIN THE PAVED ROAD AREA.
 - STREET TREES SHOULD BE LOCATED OUTSIDE OF THE PUBLIC R/W AND UTILITY EASEMENT.
 - PROVIDE SIGHT TRIANGLE EASEMENT INSIDE HORIZONTAL CURVE 'C'1 PER TRAFFIC'S DIVISION'S DIRECTION.
- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAVE APPROVED APRIL 6, 2015 TO VOLUME III, SECTION 2.5.B, TABLE 2.07 TO REDUCE THE REQUIRED INTERSECTION SPACING FOR A MAJOR COLLECTOR FROM 500' TO 252'.

- ## LEGEND
- EXISTING CONTOURS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - EXISTING STREAM
 - EXISTING STREAM BUFFER
 - APPROXIMATE 100 YEAR FLOODPLAIN LIMITS
 - EXISTING STRUCTURE
 - PROPOSED STRUCTURE
 - SLOPES 25% OR GREATER
 - SLOPES 15% TO 24.9%
 - LIMIT OF WETLANDS
 - 100 YEAR FLOODPLAIN
 - FOREST CONSERVATION EASEMENT
 - FOREST CONSERVATION SIGN
 - PUBLIC SWM, DRAINAGE & UTILITY EASEMENT
 - PRIVATE USE-IN-COMMON ACCESS EASEMENT
 - PRIVATE UTILITY EASEMENT
 - PROP. STREET TREE
 - PROP. SIDEWALK/PEDESTRIAN IMPROVEMENTS
 - PROP. MICRO-BIORETENTION FACILITY
 - PROP. BIO-SWALE
 - PROP. DRYWELL
 - SOIL DELINEATION
 - SOILS DELINEATION

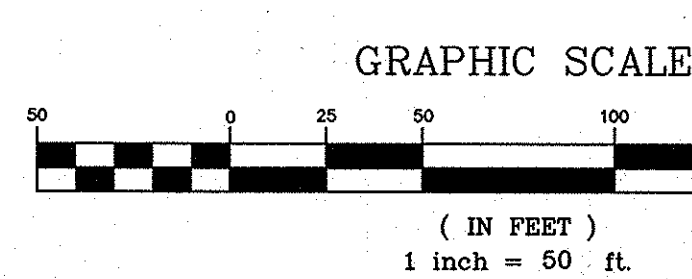
COORDINATE CHART

NO.	NORTH	EAST
1	N 554704.9425	E 1348422.3599
2	N 554736.0508	E 1348474.6882
3	N 554675.1234	E 1348669.0319
4	N 554658.1705	E 1348666.3227
5	N 554647.0736	E 1348759.2622
6	N 554626.2725	E 1348930.8983
7	N 554618.3433	E 1348997.3287
8	N 554558.8142	E 1349007.0058
9	N 554515.9067	E 1349130.5907
10	N 554241.5405	E 1348994.1209
11	N 554134.3860	E 1348939.9194
12	N 554051.9973	E 1348881.2489
13	N 553793.5465	E 1348750.9020
14	N 553966.6379	E 1348724.8566
15	N 553994.2495	E 1348706.6207
16	N 554010.6200	E 1348705.4818
17	N 554104.5101	E 1348637.1894
18	N 554244.2605	E 1348633.8478
19	N 554504.3082	E 1348626.9097
20	N 554515.0455	E 1348413.7614
21	N 554550.4203	E 1348413.7459
22	N 554643.1747	E 1348417.9352
23	N 554663.2909	E 1348419.2630

MINIMUM LOT SIZE CHART

LOT #	GROSS AREA	PIPESTEM AREA	NET AREA
9	10,092 SF	1,072 SF	9,020 SF
10	10,479 SF	1,072 SF	9,407 SF

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY
Mark A. Long
PLANNING DIRECTOR
DATE: 4/29/15



FINAL DETERMINATION OF GRAVE AND CEMETERY STATUS TO BE MADE PRIOR TO SIGNATURE APPROVAL OF FINAL PLAN

NO.	DESCRIPTION
1	COVER SHEET AND EXISTING CONDITIONS PLAN
2	LAYOUT PLAN
3	GRADING, SEDIMENT & EROSION CONTROL AND SOILS PLAN
4	LANDSCAPE AND FOREST CONSERVATION PLAN
5	FOREST CONSERVATION DETAILS
6	ROAD PROFILE

BENCHMARK ENGINEERING, INC.
8400 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6444
WWW.BE-ENGINEERING.COM

OWNER: PARCELS 04 & 108
LISA MARIE SMITH
6128 EDWARD HILL ROAD
ELLICOTT CITY, MD 21043

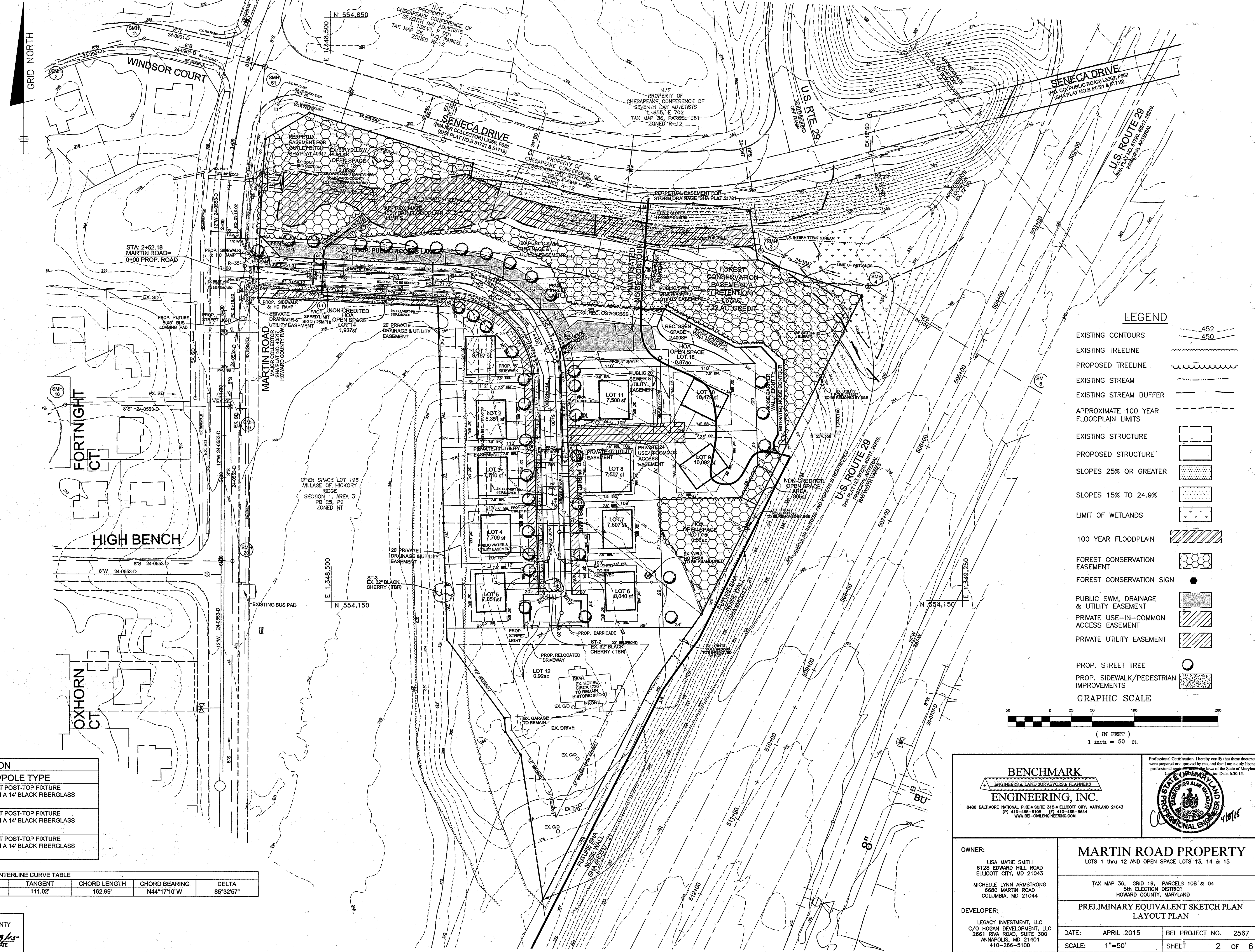
DEVELOPER: LEGACY INVESTMENT, LLC
C/O HOGAN DEVELOPMENT, LLC
2661 RIVA ROAD, SUITE 300
ANNAPOLIS, MD 21401
410-266-5100

MARTIN ROAD PROPERTY
LOTS 1 thru 12 AND OPEN SPACE LOTS 13, 14 & 15

TAX MAP 36, GRID 19, PARCELS 108 & 04, 495
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

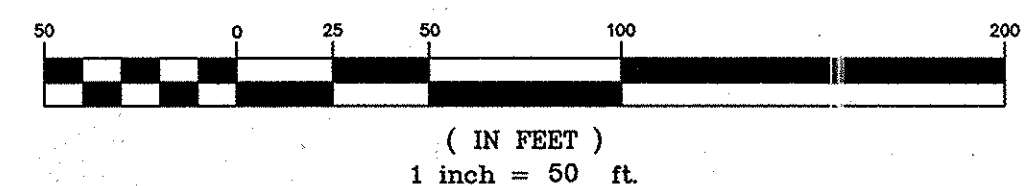
PRELIMINARY EQUIVALENT SKETCH PLAN
COVER SHEET AND EXISTING
CONDITIONS PLAN

DATE: APRIL 2015 BEI PROJECT NO. 2567
SCALE: 1"=50' SHEET 1 OF 6



LEGEND

- EXISTING CONTOURS 452
450
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- APPROXIMATE 100 YEAR FLOODPLAIN LIMITS
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
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- PRIVATE UTILITY EASEMENT
- PROP. STREET TREE
- PROP. SIDEWALK/PEDESTRIAN IMPROVEMENTS



STREET LIGHT LOCATION		
LOCATION	OFFSET	FIXTURE/POLE TYPE
CL STA 0+33.3	33' RT.	LED-150 WATT POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
CL STA 3+75.5	15' LT.	LED-100 WATT POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
CL STA 7+43.5	35' RT.	LED-100 WATT POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE

CENTERLINE CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	CHORD LENGTH	CHORD BEARING	DELTA
C1	179.17'	120.00'	111.02'	162.99'	N44°17'10"W	85°32'57"

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY
Denise D'Angelo 4/8/15
 PLANNING DIRECTOR DATE

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & DESIGNERS
 8480 BALTIMORE NATIONAL PIKE A SUITE 315 • ELICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-8644
 WWW.BE-ENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer in the State of Maryland, License No. 41015, Issue Date: 6.30.15.

OWNER:
 LISA MARIE SMITH
 6128 EDWARD HILL ROAD
 ELICOTT CITY, MD 21043

MICHELLE LYNN ARMSTRONG
 6880 MARTIN ROAD
 COLUMBIA, MD 21044

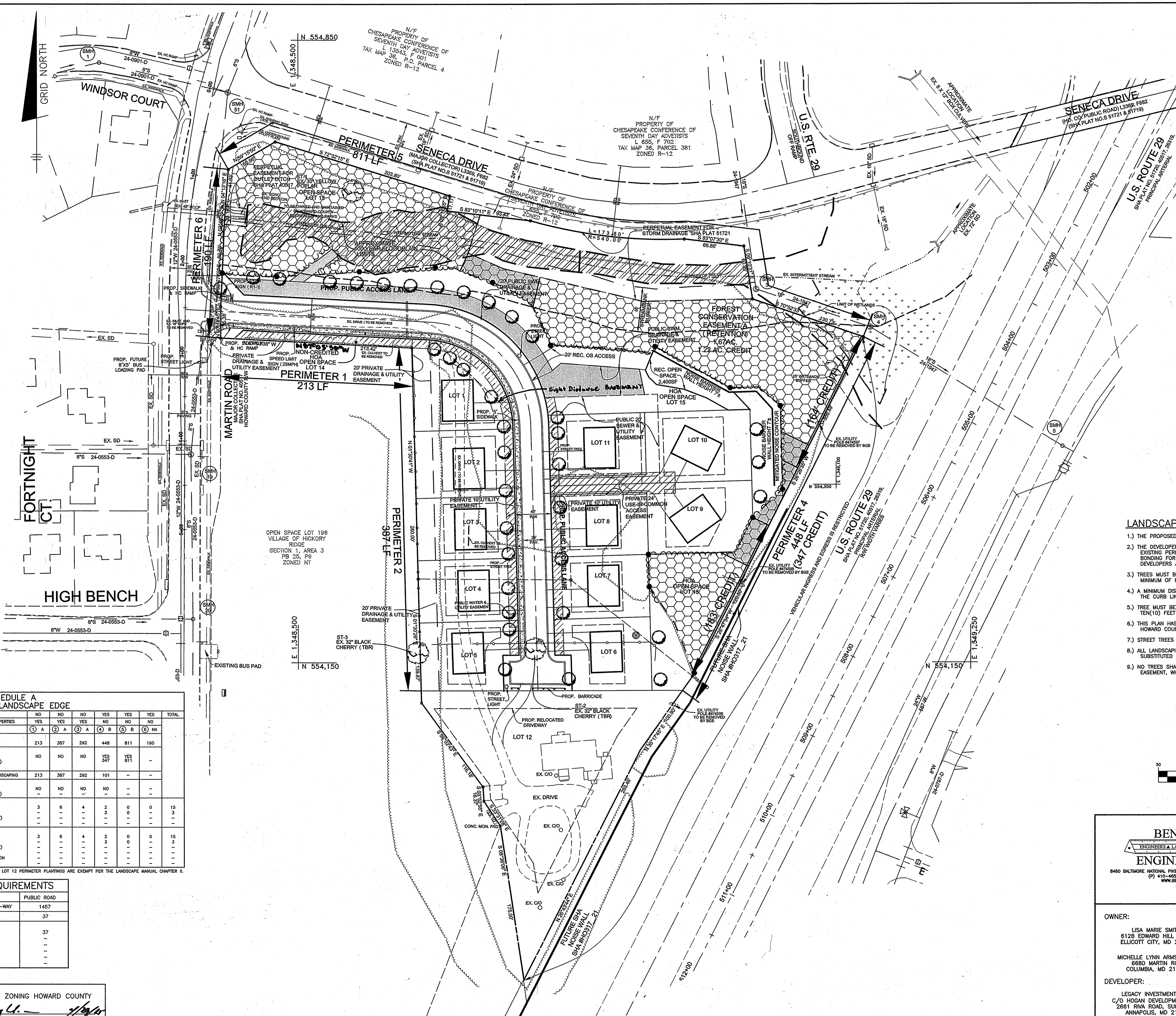
DEVELOPER:
 LEGACY INVESTMENT, LLC
 C/O HOGAN DEVELOPMENT, LLC
 2661 RIVA ROAD, SUITE 300
 ANNAPOLIS, MD 21401
 410-266-5100

MARTIN ROAD PROPERTY
 LOTS 1 THRU 12 AND OPEN SPACE LOTS 13, 14 & 15

TAX MAP 36, GRID 19, PARCELS: 108 & 04
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

PRELIMINARY EQUIVALENT SKETCH PLAN
 LAYOUT PLAN

DATE: APRIL 2015 BEI PROJECT NO. 2567
 SCALE: 1"=50' SHEET 2 OF 6



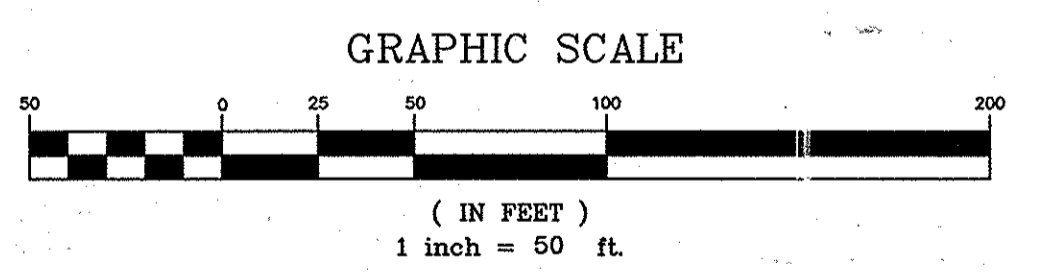
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- LIMIT OF WETLANDS
- 100 YEAR FLOODPLAIN
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGN
- PUBLIC SWM, DRAINAGE & UTILITY EASEMENT
- PRIVATE USE-IN-COMMON ACCESS EASEMENT
- PRIVATE UTILITY EASEMENT
- NON CREDITED FOREST CONSERVATION EASEMENT AREAS

LANDSCAPING NOTES

- 1.) THE PROPOSED LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS AS SHOWN ON THESE PLANS.
- 2.) THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL INTERNAL PLANTINGS; THE PRESERVATION OF THE EXISTING PERIMETER VEGETATION; AND FOR THE PERIMETER PLANTINGS AS SHOWN ON THESE PLANS. BONDING FOR THE PROPOSED PLANTINGS IS THE OBLIGATION OF THE DEVELOPER AS PART OF THE DEVELOPERS AGREEMENT.
- 3.) TREES MUST BE A MINIMUM OF FOUR (4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE (5) FEET FROM ANY STORM DRAIN.
- 4.) A MINIMUM DISTANCE OF TWENTY (20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM STREET LIGHTS.
- 5.) TREE MUST BE PLANTED A MINIMUM OF FIVE (5) FEET FROM AN OPEN SPACE ACCESS STRIP AND TEN (10) FEET FROM A DRIVEWAY.
- 6.) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- 7.) STREET TREES SHALL BE PLANTED SIX (6) FEET BEHIND FACE OF CURB WHEN THERE ARE NO SIDEWALKS.
- 8.) ALL LANDSCAPING PLANT TYPES SHOWN ON THESE PLANS ARE RECOMMENDATIONS AND MAY BE SUBSTITUTED WITH APPROVED EQUIVALENTS FROM THE HOWARD COUNTY LANDSCAPE MANUAL.
- 9.) NO TREES SHALL BE PLACED WITHIN 10' BEHIND A RETAINING WALL OR WITHIN A RELATED MAINTENANCE EASEMENT, WHICHEVER IS GREATER.

J. Chris Cogle
 J. CHRIS COGLE
 DNR/QUALIFIED PROFESSIONAL



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAY		ADJACENT TO PERIMETER PROPERTIES		TOTAL	
	YES	NO	YES	NO	YES	NO
PERIMETER NO. / LANDSCAPE TYPE	1	2	3	4	5	6
LINEAR FEET OF PERIMETER (FRONTAGE/ROADWAY)	213	387	232	448	811	190
CREDIT FOR EXISTING VEGETATION: NO OR YES (4/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	YES 347	YES 811	-
LINEAR FEET OF REQUIRED PERIMETER LANDSCAPING	213	387	232	101	-	-
CREDIT FOR WALL, FENCE OR BERM: NO OR YES (4/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	-	-	-
NUMBER OF PLANTS REQUIRED:						
SHADE TREES	3	6	4	2	0	15
EVERGREEN TREES	1	1	1	3	0	15
OTHER TREES (2:1 SUBSTITUTE)	1	1	1	1	1	1
SHRUBS	1	1	1	1	1	1
NUMBER OF PLANTS PROVIDED:						
SHADE TREES	3	6	4	2	0	15
EVERGREEN TREES	1	1	1	3	0	15
OTHER TREES (2:1 SUBSTITUTE)	1	1	1	1	1	1
SHRUBS (10:1 SUBSTITUTE)	1	1	1	1	1	1
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)						

DUO TO THE EXISTING DWELLING LOCATED ON LOT 12 PERIMETER PLANTINGS ARE EXEMPT PER THE LANDSCAPE MANUAL CHAPTER II.

STREET TREE REQUIREMENTS

ROADWAY NAME:	PUBLIC ROAD
LINEAR FEET OF ROADWAY RIGHT-OF-WAY	1457
STREET TREES REQUIRED 1:40	37
NUMBER OF PLANTS PROVIDED:	
SHADE TREES	37
EVERGREEN TREES	-
OTHER TREES (2:1 SUBSTITUTE)	-
SHRUBS (10:1 SUBSTITUTE)	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY
Mark A. Long
 PLANNING DIRECTOR

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
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MARTIN ROAD PROPERTY
 LOTS 1 thru 12 AND OPEN SPACE LOTS 13, 14 & 15
 TAX MAP 36, GRID 19, PARCELS 10B & 04
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

PRELIMINARY EQUIVALENT SKETCH PLAN LANDSCAPE AND FOREST CONSERVATION PLAN

OWNER: LISA MARIE SMITH
 6128 EDWARD HILL ROAD
 ELICOTT CITY, MD 21043

DEVELOPER: LEGACY INVESTMENT, LLC
 C/O HOGAN DEVELOPMENT, LLC
 2661 RIVA ROAD, SUITE 300
 ANNAPOLIS, MD 21401
 410-266-5100

DATE: APRIL 2015
 SCALE: 1"=50'

BEI PROJECT NO. 2567
 SHEET 4 OF 6

FOREST CONSERVATION NOTES:

1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
2. THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
4. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
7. PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
8. THE FOREST CONSERVATION OBLIGATION FOR THIS SITE SHALL BE MET BY THE ON-SITE RETENTION AMOUNT OF 1.22 ACRES. THE REMAINING 0.68 WILL BE PROVIDED BY AN OFFSITE BANK (TBD) OR FEE-IN-LIEU.

THE WATERSHED FOR THIS DRAINAGE AREA IS THE MIDDLE PATUXENT RIVER, DNR LISTING NUMBER 2111306.

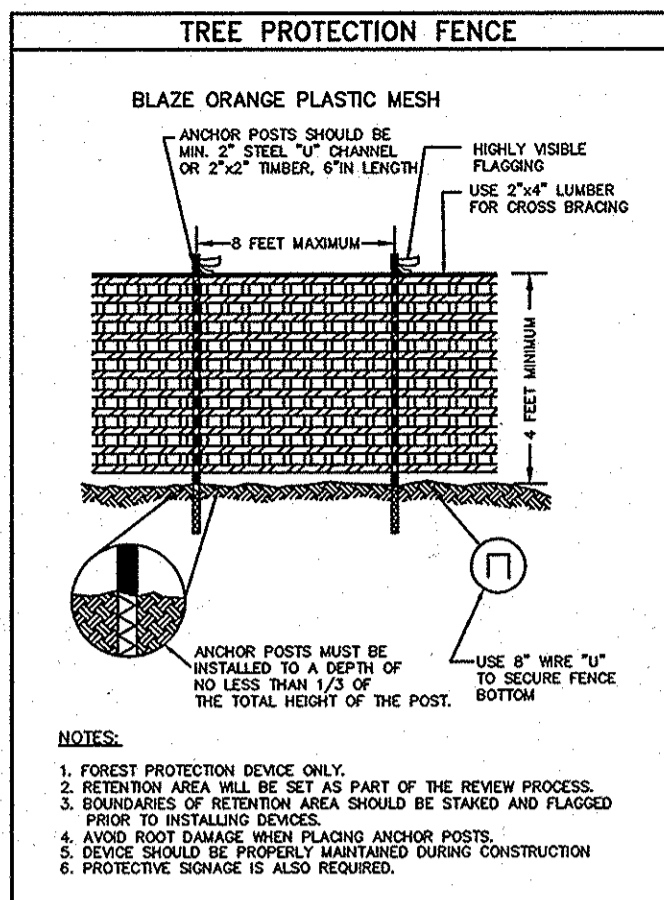
FOREST CONSERVATION EASEMENT CHART

EASEMENT AREA	TYPE	CREDITED AREA
1.67 AC.	RETENTION	1.22 AC.

SPECIMEN TREE TABLE

NO.	COMMON NAME	SCIENTIFIC NAME	DBH (IN.)	CONDITION RATING	CONDITION/COMMENTS
1	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	30	GOOD	MINOR BROKEN LIMBS
2	BLACK CHERRY	PRUNUS SEROTINA	32(TWIN)	POOR	BROKEN LIMBS, TRUNK DAMAGE, SPLIT @ 7'
3	BLACK CHERRY	PRUNUS SEROTINA	32	POOR	3-TRUNK SPLIT @ 5.5', ONE TRUNK DEAD, BROKEN LIMBS

FOREST CONSERVATION WORKSHEET		MARTIN ROAD 2667		5-Aug-02		
NET TRACT AREA:						
A. Total tract area ...					6.69	
B. Land dedication acres (parks, county facility, etc.) ...					0.00	
C. Land dedication for roads or utilities (not being constructed by this plan) ...					0.00	
D. Area to remain in commercial agricultural production/use ...					0.00	
E. Other deductions (specify) ... FLOODPLAIN					0.45	
F. Net Tract Area					6.24	
LAND USE CATEGORY: (from Trees Technical Manual)						
Input the number "1" under the appropriate land use, limit to only one entry.						
	ARA	MDR	IDA	HDR	MPD	CIA
	0	0	0	1	0	0
G. Afforestation Threshold ...					15%	x F = 0.94
H. Conservation Threshold ...					20%	x F = 1.25
EXISTING FOREST COVER:						
I. Existing forest cover						3.76
J. Area of forest above afforestation threshold						2.82
K. Area of forest above conservation threshold						2.51
BREAK EVEN POINT:						
L. Forest retention above threshold with no mitigation						1.75
M. Clearing permitted without mitigation						2.01
PROPOSED FOREST CLEARING:						
N. Total area of forest to be cleared						2.54
O. Total area of forest to be retained						1.22
PLANTING REQUIREMENTS:						
P. Reforestation for clearing above conservation threshold						0.63
Q. Reforestation for clearing below conservation threshold						0.06
R. Credit for retention above conservation threshold						0.00
S. Total reforestation required						0.68
T. Total afforestation required						0.00
U. Credit for landscaping (may not exceed 20% of "S")						0.00
V. Total reforestation and afforestation required						0.68



FOREST PROTECTION PROCEDURES - Preconstruction Phase

- 1) The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of forest conservation easement shown in the approved site development plan prior to the start of construction activity. All areas within protective easement are to be considered "off limits" to any construction activities. The optional protective fencing shall be installed at the outside edge of forested areas and should be combined with sediment control devices when possible. The limit of the critical root zone and therefore the location of the protective devices is to be determined as follows:
Edge of Forested Area - 1 foot of protective radius/inch of DBH or an eight foot protective radius, whichever is greater.
Critical Root Zone for the forest on this site is an average of 12 feet from the trunk of the tree. Critical root zone for the Specimen Tree is 30'.
Construction activities expressly prohibited within the preservation areas are:
Placing or stockpiling backfill or top soil in protected areas
Felling trees into protected areas
Driving construction equipment into or through protected areas
Burning in or in close proximity to protected areas
Stacking or storing supplies of any kind
Concrete wash-off areas
Conducting trenching operations
Grading beyond the limits of disturbance
Parking vehicles or construction equipment
Removal of root mat or topsoil
Siting and construction of:
Utility lines
Access roads
Impervious surfaces
Stormwater management devices
Staging areas
- 2) Protective fencing (see Figure "Protective Fencing") shall be the responsibility of the general contractor. The general contractor shall affix signs to the fencing at 25' minimum intervals indicating that these areas are "Forest Retention Area" (see Figure "Signage"). The general contractor shall take great care to assure the restricted areas are not violated and that root systems are protected from smothering, flooding, excessive wetting from dewatering operations, off-site runoff, spillage, and drainage or solutions containing materials hazardous to tree roots.
- 3) The general contractor shall be responsible for any tree damaged or destroyed within the preservation areas whether caused by the contractor, his agents, employees, subcontractors, or licensees.
- 4) Foot traffic shall be kept to a minimum in the protective areas.
- 5) All trees which are not to be preserved within fifty feet of any tree preservation areas are to be removed in a manner that will not damage those trees that are designated for preservation. It is highly recommended that tree stumps within this fifty foot area be ground out with a stump grinding machine to minimize damage.
- 6) The general contractor shall designate a "wash out" area onsite for concrete trucks which will not drain toward a protected area.
- 7) A pre-construction meeting shall be held with local authorities before any disturbance has taken place on site.

FOREST PROTECTION PROCEDURES - Construction Phase

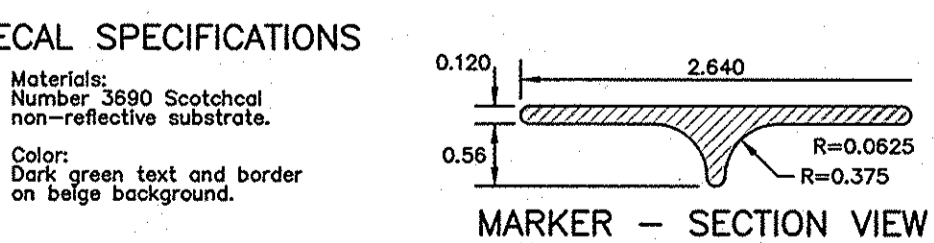
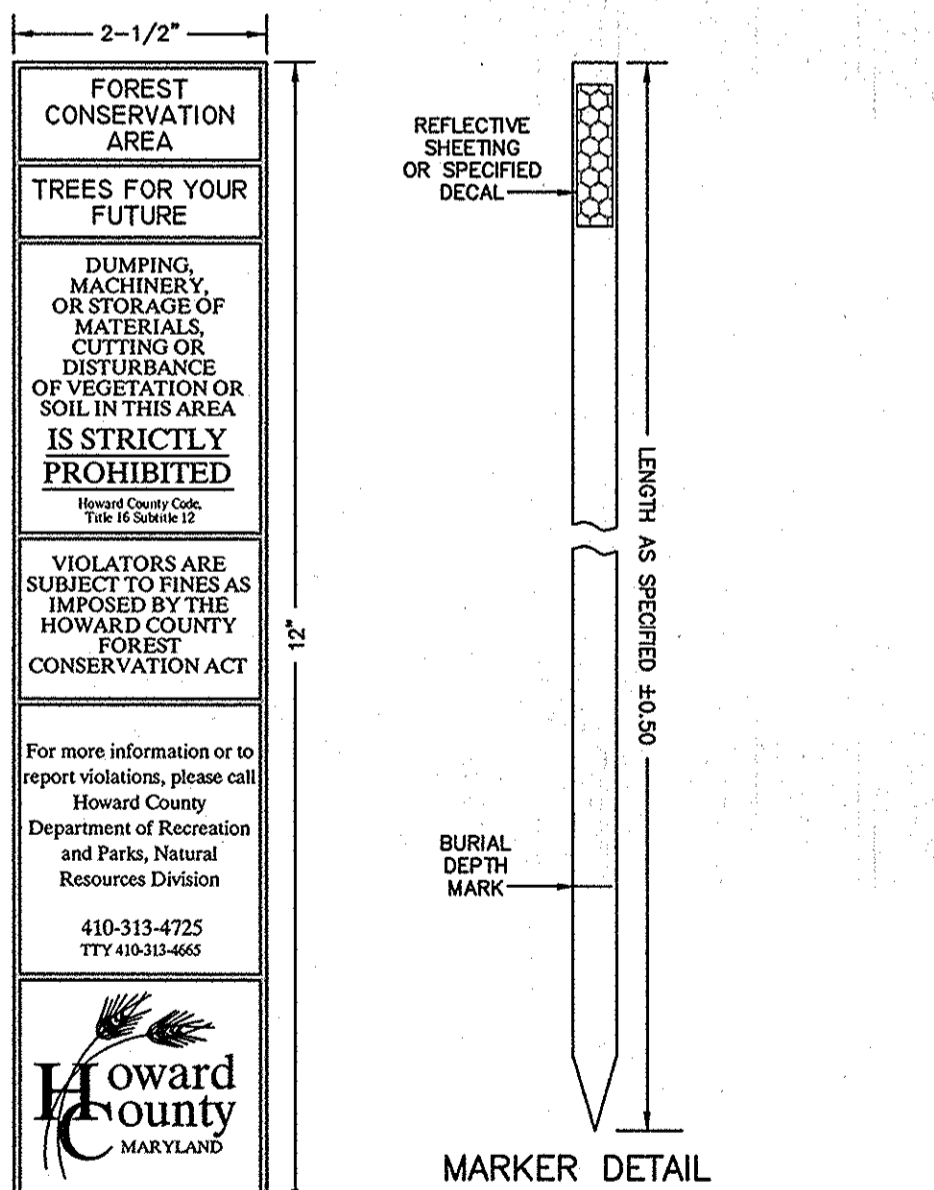
- Forest and tree conditions should be monitored during construction and corrective measures taken when appropriate. The following shall be monitored:
- a) Soil compaction
 - b) Root injury - prune and monitor; consider crown reduction
 - c) Limb injury - prune and monitor
 - d) Flooded conditions - drain and monitor; correct problem
 - e) Drought conditions - water and monitor; correct problem
 - f) Other stress signs - determine reason, correct, and monitor

FOREST PROTECTION PROCEDURES - Post Construction Phase

- The following measures shall be taken:
- 1) Corrective measures if damages were incurred due to negligence:
 - a) Stress reduction
 - b) Removal of dead or dying trees. This may be done only if trees pose an immediate safety hazard.
 - 2) Removal of temporary structures:
 - a) No burial of discarded materials will occur onsite within the conservation area.
 - b) No open burning within 100 feet of a wooded area.
 - c) All temporary forest protection structures will be removed after construction.
 - d) Remove temporary roads by removing stone or broadcasting mulch; pre-construction elevation should be maintained.
 - e) Aerate compacted soil.
 - f) Replant disturbed sites with trees, shrubs and/or herbaceous plants.
 - g) Retain signs for retention areas or specimen trees.
 - h) A County official shall inspect the entire site.
 - 3) Future protection measures:
 - a) Howard County and the developer shall arrange for the dedication of an appropriate forest conservation easement at a later date.

FOREST PROTECTION PROCEDURES - Preconstruction Phase

- Stress Reduction and Protection of Specimen Trees Isolated from Forest Retention Areas and General Forest Retention Areas (as they may apply)
- Isolated specimen trees that are to be preserved will be examined to determine if stress reduction techniques are needed. Protective measures and their evaluation criteria are provided on this plan only if they are employed herein.
- Root Pruning Evaluation Criteria
Will the critical root zone be affected by construction activities such as grade changes, digging for foundations and roads or utility installation?
- Design Considerations
- a) Prune prior to construction as shown on the plan (see Figure "Root Pruning Detail.")
 - b) Prune root with a clean cut using proper pruning equipment such as a vibratory knife.
 - c) Exact location of pruning trench should be identified, and immediately backfilled to cover exposed roots after pruning with soil removed other topsoil, peat moss, or other suitable material or with other high organic soil.
 - d) For trees over 15" in diameter, root pruning may be done up to one year in advance of construction.
 - e) Tree(s) will be monitored for signs of stress.
- Crown Reduction or Pruning Evaluation Criteria
Has the root system been significantly reduced (>30%) or are there dead, damaged, or diseased limbs?
- Design Considerations
- a) Reduce only at specified times of the year:
Flowering trees - only after flowering and before bud set
Non-flowering trees - in late winter, early spring or mid summer
 - b) No more than 1/3 of the crown should be removed at one time using acceptable pruning methods (see Figure "Crown Reduction Detail")
 - c) Monitor for signs of stress
- Watering Evaluation Criteria
Will construction activities alter the hydrology of the site? Has or will root pruning occur?
- Design Considerations
- a) Water only as necessary
 - b) Monitor for signs of stress (see Figure "Tree Planting and Maintenance Calendar")
- Fertilizing Evaluation Criteria
Is or will be tree(s) be under stressful conditions? Has or will root pruning occur?
- Design Considerations
- a) Use low nitrogen and slow release fertilizers.
 - b) Apply in late fall or early spring (see Figure "Tree Planting and Maintenance and Calendar")
 - c) For small trees (<3" in diameter), use punch hole method or pressurized injection method (see Figure "Application of Fertilizers by Injection.")
 - d) For larger trees (>3" diameter), use punch hole method or pressurized injection method (see Figure "Application of Fertilizers by Injection.")
 - e) Do not apply fertilizer any closer than 3' from tree trunk for pressurized injection method.
 - f) Monitor for signs of stress.

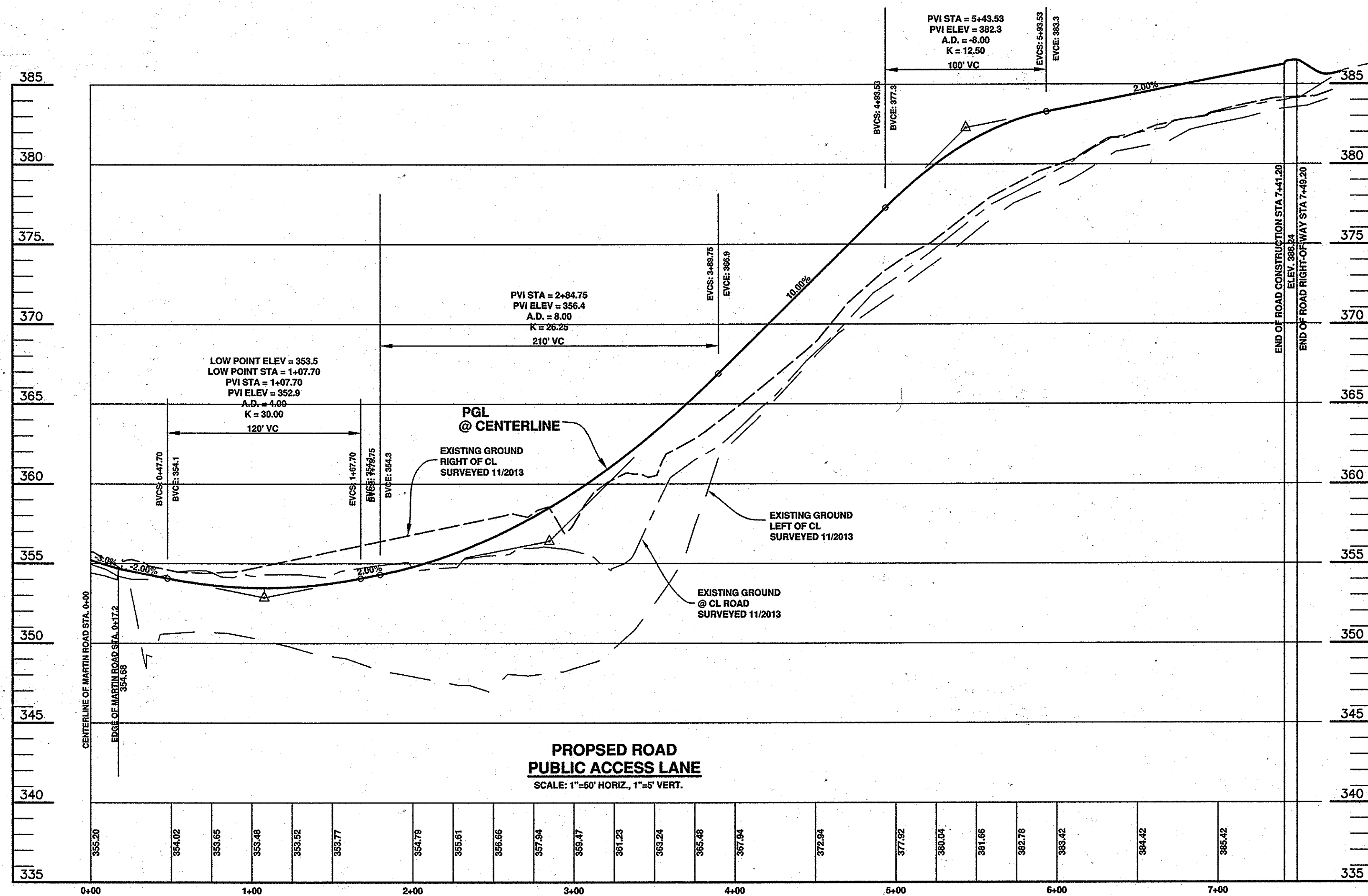


FCE CARSONITE MARKER
NOT TO SCALE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY
Frankie A. Wright 4/29/15
PLANNING DIRECTOR DATE

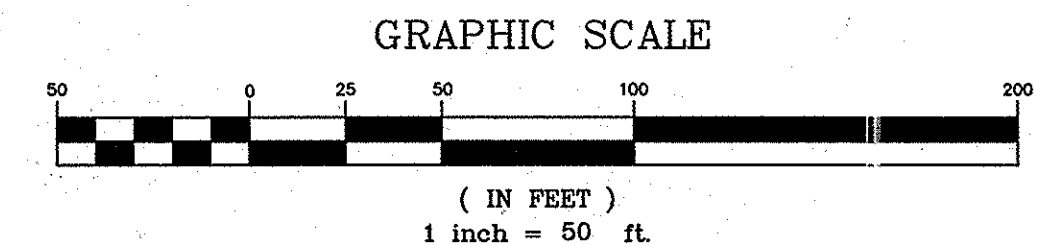
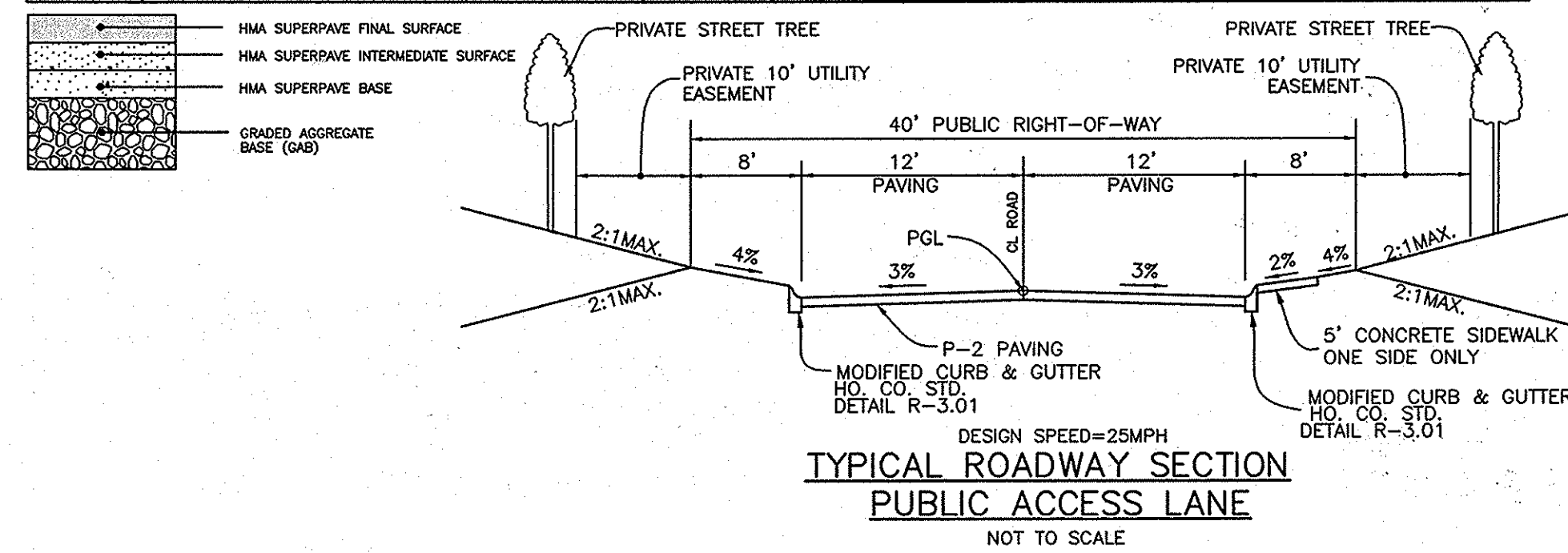
J. Chris Ogle
J. CHRIS OGLE
DNR QUALIFIED PROFESSIONAL

<p>BENCHMARK ENGINEERING, INC. ENGINEERS & LAND SURVEYORS & PLANNERS 8450 BALTIMORE NATIONAL PIKE A SUITE 315 A ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6444 WWW.BE-ENGINEERING.COM</p>		<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer in the State of Maryland. Registration Date: 6.30.15</p>
<p>OWNER: LISA MARIE SMITH 6128 EDWARD HILL ROAD ELLICOTT CITY, MD 21043</p> <p>MICHELLE LYNN ARMSTRONG 6880 MARTIN ROAD COLUMBIA, MD 21044</p> <p>DEVELOPER: LEGACY INVESTMENT, LLC C/O HOGAN DEVELOPMENT, LLC 2661 RIVA ROAD, SUITE 300 ANNAPOLIS, MD 21401 410-266-5100</p>	<p>MARTIN ROAD PROPERTY LOTS 1 thru 12 AND OPEN SPACE LOTS 13, 14 & 15</p> <p>TAX MAP 36, GRID 19, PARCELS 108 & 04 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p> <p>PRELIMINARY EQUIVALENT SKETCH PLAN FOREST CONSERVATION DETAILS</p> <p>DATE: APRIL 2015 BEI PROJECT NO. 2567 SCALE: 1"=30' SHEET 5 OF 6</p>	



PAVING SECTION

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)											
		3 TO <5		5 TO <7		≥7		3 TO <5		5 TO <7		≥7	
		PAVEMENT MATERIAL (INCHES)				MIN HMA WITH GAB				HMA WITH CONSTANT GAB			
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SAC RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE											
		9.5 MM PG 64-22, LEVEL 1 (LOW ESAL)											
		HMA SUPERPAVE INTERMEDIATE SURFACE											
		9.5 MM PG 64-22, LEVEL 1 (LOW ESAL)											
		HMA SUPERPAVE BASE											
		19.0 MM PG 64-22, LEVEL 1 (LOW ESAL)											
		GRADED AGGREGATE BASE (GAB)											
		8.0 4.0 3.0 4.0 4.0 4.0											



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WWW.BE-ONLINEENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
Licenses: Professional Engineer License No. 119115
Professional Engineer

OWNER:
LISA MARIE SMITH
6128 EDWARD HILL ROAD
ELLICOTT CITY, MD 21043

DEVELOPER:
LEGACY INVESTMENT, LLC
C/O HOGAN DEVELOPMENT, LLC
2861 RIVA ROAD, SUITE 300
ANNAPOLIS, MD 21401
410-266-5100

MARTIN ROAD PROPERTY
LOTS 1 thru 12 AND OPEN SPACE LOTS 13, 14 & 15

TAX MAP 36, GRID 19, PARCELS 10B & 04
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

PRELIMINARY EQUIVALENT SKETCH PLAN ROAD PROFILE

DATE: APRIL 2015
SCALE: 1"=50'

BEI PROJECT NO. 2567
SHEET 6 OF 6

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY
Mark A. Gaylor
PLANNING DIRECTOR 4/29/15
DATE